

Specifications & Special Provisions:

Development and Usage for Local Agencies

PREFACE

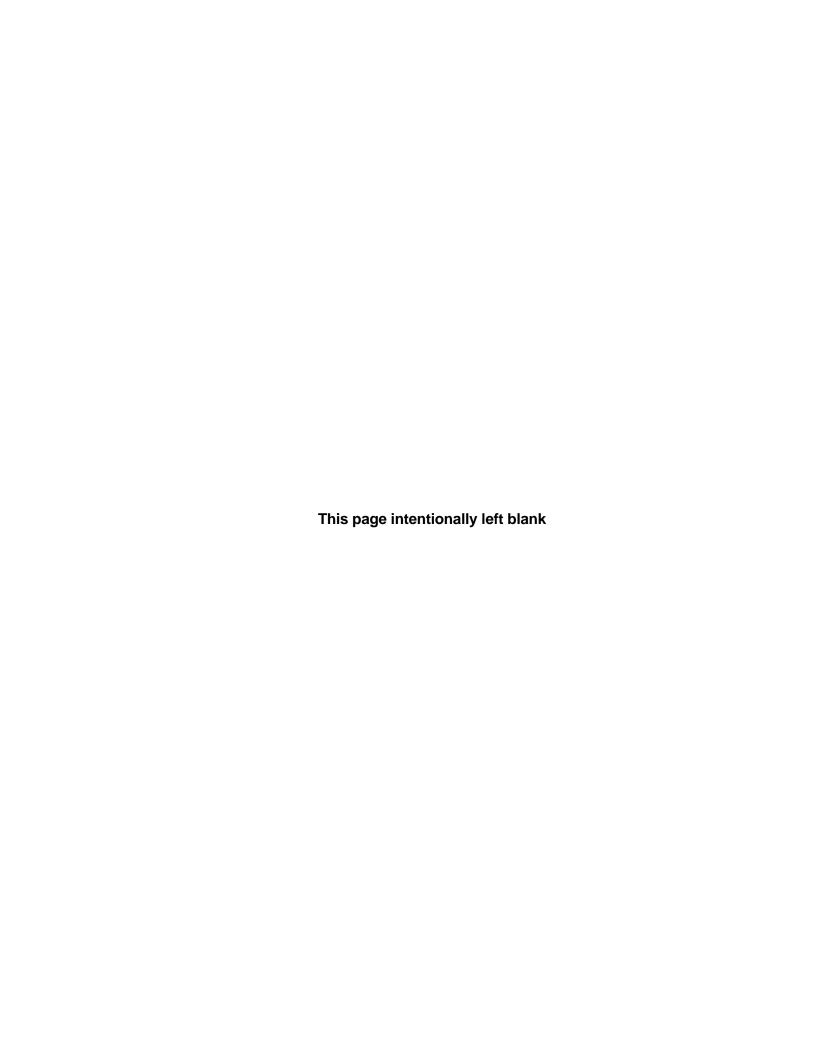
This pamphlet was prepared to provide local agencies and consultants a quick reference to the development and use of specifications and special provisions. It is intended that the provisions of this pamphlet be a reference and not the final authority.

The Illinois Department of Transportation's Bureau of Design and Environment Manual and the Bureau of Local Roads and Streets manuals were used in the development of this pamphlet.

The pamphlet was revised June 2001

Additional copies may be obtained from:

Illinois Department of Transportation Bureau of Local Roads and Streets Room 205 2300 South Dirksen Parkway Springfield, IL 62764 (217) 782-6315



OVERVIEW

The Standard Specifications for Road and Bridge Construction (Standard Specifications), Supplemental Specifications, Recurring Special Provisions, Contract Special Provisions, and plans are all essential parts of the contract proposal. They should complement each other and provide complete instructions for the work to be accomplished. If a discrepancy does exist among these documents, the relationship as described in <u>Article 105.05 of the Standard Specifications</u> will apply.

The Standard Specifications and Supplemental Specifications are included in the contract documents by the designer by referencing the applicable editions in the first paragraph of the special provision portion of the contract proposal. Recurring Special Provisions are included through the use of a check sheet. Contract Special Provisions are included in the contract proposal provided to the contractor.

The Standard Specifications and Supplemental Specifications are reviewed by the Specifications Committee that acts in an advisory capacity to the Director of Highways. The Specifications Committee includes representatives from the Bureaus of Bridges and Structures, Design and Environment, Construction, Materials and Physical Research, Operations, Local Roads and Streets and the Federal Highway Administration. IDOT district offices also hold three seats on a three-year rotating basis. The chairperson is chosen by the Director of Highways for a four-year term. The Engineer of Policy and Procedures in the Bureau of Design and Environment is the recording secretary.

Suggested changes to the Standard Specifications and Supplemental Specifications initiated by local highway authorities or district Local Roads and Streets' staff should be submitted to the Bureau of Local Roads and Streets' Policy and Procedures Unit for consideration by the Specification Committee.

STANDARD SPECIFICATIONS

The <u>Standard Specifications</u> for <u>Road and Bridge Construction</u> (Standard Specifications) are the specifications developed and adopted by the Department for highway improvement contracts. The Standard Specifications outline the general requirements and covenants applicable to all highway improvements as well as provisions relating to construction methods, equipment, and material for individual construction items on road and bridge construction projects awarded by the Department. Use of the Standard Specifications is also required for local agency projects administered by the Department. They may also be used for other local agency projects and private work.

The Standard Specifications are published in book form and are updated every 3 to 5 years. Copies may be obtained from the Bureau of Highways Administration, Manual Sales. An electronic version is also available on the Department's web site.

SUPPLEMENTAL SPECIFICATIONS

<u>Supplemental Specifications</u> are additions, deletions, and/or revisions to the Standard Specifications that have been adopted by the Department since the last printing of the Standard Specifications. **They are considered part of the Standard Specifications.**

Supplemental Specifications are printed in book form and are revised each year. Copies of the latest editions can be obtained from the Bureau of Highways Administration, Manual Sales. An electronic version is also available on the Department's web site.

SPECIAL PROVISIONS

Special provisions are additions, deletions, and/or revisions to the Standard Specifications and the Supplemental Specifications documenting conditions and requirements for special situations. A special provision should not modify another special provision. Special provisions are either included in the contract documents or referenced through a check sheet of Recurring Special Provisions.

Recurring Special Provisions

Recurring Special Provisions are special provisions that are commonly used on many projects. Recurring Special Provisions are printed with the Supplemental Specifications and inserted into a contract proposal by using the check sheet, contained in the Supplemental Specifications and Recurring Special Provisions Book or available on the Department's web site. The designer is responsible for placing an "X" by the appropriate Recurring Special Provisions for the project and including the check sheet in the contract proposal.

Contract Special Provisions

Contract Special Provisions are the special provisions the designer includes with the proposal submitted with the plans to the District Bureau of Local Roads and Streets. They may include one or more of the following:

- 1. Inserted Special Provisions (ISPs). The Bureau of Design and Environment (BDE) issues Contract Special Provisions for statewide use throughout the year. The Bureau of Local Roads and Streets (BLRS) reviews these special provisions, incorporates those applicable to local projects into an annual packet, and issues as Inserted Special Provisions (ISPs). A list of the ISPs and the usage guide are then mailed to the local agencies and consultants. The full packet is available for download from the "Doing Business with IDOT" section of the Illinois Department of Transportation's web site under Local Roads and Streets. The designer is responsible for including the appropriate ISPs into the proposal for each project. BLRS will issue Critical ISPs throughout the year to update the annual packet. Critical ISPs are special provisions that the central BLRS determines are necessary for immediate insertion into contracts.
- 2. Guide Bridge Special Provisions (GBSPs). Guide Bridge Special Provisions are Contract Special Provisions issued by the Bureau of Bridges and Structures, which may change from letting to letting. The designer is responsible for including the appropriate GBSPs into the proposal for each project. These special provisions may become Inserted Special Provisions when no revisions have been made for at least a year. These special provisions are available on the Department's web site under Bridges and Structures.
- 3. Local Roads Special Provisions (LRs). Local Roads Special Provisions are Contract Special Provisions issued for statewide local agency use. These special provisions are written to cover the needs of local agencies when they differ from those of the State and are designated with an "LR" followed by a number which references the section of the Standard Specifications which the LR Special Provision revises (For example LR 103). LR Special Provisions are available for download from the "Doing Business with IDOT" Local Roads and Streets section of the Illinois Department of Transportation's web site. The designer is responsible for including the appropriate LR Special Provisions into the proposal for each project
- 4. District Special Provisions. District Special Provisions are Contract Special Provisions addressing concerns unique to a district (e.g. material shortages, labor agreements). These special provisions are approved by the District prior to general insertion into contract proposals. The district may also recommend these special provisions for consideration as Inserted Special Provisions or Local Roads Special Provisions. The designer is responsible for including the appropriate District Special Provisions into the proposal for each project. They may be obtained from the District office.
- 5. Project Specific Special Provisions. Project Specific Special Provisions are Contract Special Provisions written by the designer to address the unique situations on a project. These special provisions should not be developed for general use. Project Specific Special Provisions are required wherever a project contains work, material, unique sequence of operations, or any other requirements that are necessary for the completion of the project but are not included in the Standard Specifications, Supplemental Specifications, Recurring Special Provisions, Inserted Special Provisions, Guide Bridge Special Provisions, Local Roads Special Provisions, or District Special Provisions.

These special provisions should not be prepared to personalize the work ideas of the designer or to place emphasis on certain aspects of a project. The practice of emphasizing particular procedures and requirements already stated in the Standard Specifications is more properly accomplished at the preconstruction conference.

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DETERMINING WHEN SPECIAL PROVISIONS ARE NEEDED

- 1. What is the purpose of a special provision?
 - Change or clarify the general requirements or covenants of the construction contract
 - Change or clarify material/equipment requirement
 - Change or clarify a construction procedure
 - Establish or modify a pay item
 - Describe new or experimental procedure or product
- 2. When do I need a project specific special provision?
 - a. The information or portion of information is not covered elsewhere.
 - Specification Book
 - Supplemental Specifications
 - Recurring Special Provisions
 - BDE Special Provisions (Issued as Inserted Special Provisions by BLRS)
 - Guide Bridge Special Provisions
 - Local Roads Special Provisions
 - District Special Provisions
 - Highway Standards
 - b. The information cannot be covered by a General Note or Detail Drawing.
 - c. If the existing specification covers information, but not the way you think it should.
 - DO NOT REWRITE
 - Send suggested clarification to the Central Bureau of Local Roads and Streets with reasons.
- 3. How am I going to change the standard specification?
- 4. Does the special provision contain only new or revised information?
 - Do not rewrite everything to change a sentence. Suggest the following:
 - Work shall be according to Section _____ except for:
 - Revise second sentence of Article to read:

SPECIAL PROVISIONS PREPARATION

The designer should use the following steps when preparing a special provision.

- Define Need. The designer should review the existing specifications, standards, details, special provisions, and plans to ensure that there is a need for the special provision. If the topic is not adequately covered in one of the other documents, only then should a special provision be prepared.
- 2. Research. The designer should research the topic so that complete and detailed information is available before writing the special provision. If the designer determines this special provision will be applicable in more than one project, the special provision should be submitted to the District and/or Bureau of Local Roads and Streets for consideration as a District Special Provision, Local Roads Special Provision, or Inserted Special Provision.
- 3. **Format.** Prepare special provisions in the same manner as the Standard Specifications. The sections of the special provision that may need to be addressed include:
 - a. **Description.** Provide a brief narration of the work to be performed with references to specifications, plans, or other special provisions that further define the work. The description usually begins with "This work shall consist of...". Only mention the major aspects of the work.
 - b. **Materials.** Designate the materials to be used in the work and establish their requirements. Delineate complete specifications of the properties of each material and the test method. References may be made to AASHTO, ASTM, or other recognized standards/procedures. When a material is already specified in the Standard Specifications, the appropriate article or section should be referenced with any necessary changes stated. The use of proprietary specifications is generally prohibited by the Illinois Compiled Statutes. However, the Statutes do allow, under certain conditions, proprietary items, a patented or trademark product, to be used. Where designer has a need for a proprietary specification, contact your District Bureau of Local Roads and Streets for guidance.
 - c. **Equipment.** Designate the equipment to be used in the work and establish its requirements. Where a piece of equipment is already specified in the Standard Specifications, reference the appropriate article or section with any necessary changes stated.
 - d. Construction Requirements. Describe the sequence of construction operations or the desired end product. Only use the presentation for the sequence of construction operations if it is critical to achieve the desired result.
 - e. **Method of Measurement.** Describe the units of measurements for each pay item and where the item will be measured- in place, in truck, at plant. Designate any modifying factors and other requirements needed to establish a definite measured unit.
 - f. **Basis of Payment.** Describe the units and the pay item name for which payment will be made. Note the entire pay item name in upper-case letters. Do not include a listing of all elements of the work.

- 4. **Writing the Special Provisions.** Once all research has been completed, the first draft can then be prepared. The designer may want to review existing special provisions for guidance. The following are several grammatical recommendations for preparing special provisions:
 - a. Wording. Write in passive voice.
 - b. Sentences. Prepare the special provision using simple language and words. Keep words and sentences short, 20 words or less, unless complexity is unavoidable.
 - c. Paragraphs. Limit paragraphs to three or four sentences.
 - d. Terminology. Words should be used consistent with their exact meaning. Use the same word throughout; do not use synonyms. Avoid words that have dual meaning. Extraneous words and phrases should be omitted.
 - e. Pronouns. Avoid the use of pronouns, even if this results in frequent repetition of nouns.
 - f. Punctuation. Carefully consider the punctuation using the minimum number of punctuation marks consistent with the precise meaning of the language. Make certain that the meaning of any sentence is not in doubt.
 - g. Parentheses. Avoid the use of parentheses (). Instead, use commas or rewrite the sentence.
 - h. Number. Write all numbers numerically. It is unnecessary to write numbers in both words and figures. Write fractions as decimals. Decimals less than 1 and greater than -1 should be preceded by a zero.
 - i. Dates and Times. Use numbers for time, day and year. Use the full name of the month.
 - j. Do not reproduce a standard specification in its entirety to revise one or two elements.
- 5. **Reviewing.** The designer should review the previously completed paragraphs as succeeding ones develop. Where necessary, redraft preceding paragraphs to reflect later thoughts.
- 6. **Submission.** The designer should prepare and distribute the preliminary draft of the special provision to the district for review and comment as soon as practical. The designer will be responsible for incorporating the reviewers' comments into the final special provision.

GUIDELINES

In addition to the previous sections, the following presents several guidelines the designer should consider when developing special provisions:

- Completeness. The designer should ensure that the essentials have been included, each requirement is definitive and complete, and the Standard Specifications have not been duplicated.
- 2. Clarity. To ensure clarity the designer should:
 - Clearly delineate the method of measurement and basis of payment.
 - Make a clear, concise analysis of the job requirements for general conditions, types of construction, and quality of workmanship. Do not leave the contractor in doubt on what they will be required to do.
 - Give directions never suggestions. Use "shall" instead of "should".
 - Never assume the contractor knows what is meant.
 - Avoid conflicting or ambiguous requirements. Every specification should have only one meaning.
 - Never conceal difficulties or hazards from the contractor. This will avoid conflict during the project.
- 3. **Conciseness.** Each special provision should be as concise as practical. When reviewing the special provision, the designer should consider the following suggestions:
 - Where practical, refer to an existing standard specification and delineate only the portion changed.
 - Avoid duplications between different special provisions and any related contract documents.
 - Do not give reasons for a specific requirement.
 - Do not provide additional information that is unnecessary for the preparation of bids and the accomplishment of the work.
 - Once stated, do not repeat any instruction, requirement, direction, or information.
 - Use cross references, wherever practical.
 - Write specification in the positive form. Use "will" instead of "will not".
 - Do not include instructions to the Department in the specification.

- 4. **Correctness.** To ensure that the special provision is written correctly, the designer should review the following:
 - Only include items that can be required or enforced.
 - Ensure that the specification does not punish the contractor or supplier.
 - Ensure that the specification does not unintentionally exclude an acceptable product, construction method or equipment.
 - Ensure that the special provision does not change the basic design of the item.
 - Minimize the inclusion of work incidental to a pay item.
 - Do not specify impossibilities. The practical limits of workers and materials must be known and recognized.
 - Specify standard sizes and patterns wherever practical.
 - Avoid personal preferences. Use best available technology.
 - Ensure that the contractor will not be held responsible for the possible inaccuracy of information furnished by the Department.
 - Ensure sufficient attention has been provided to assessing the durability or reliability of
 the material or procedure discussed. The use of recognized standards should be
 referenced to ensure that the specified performance or characteristics are achieved. If
 not, define the testing criteria completely and accurately.
 - Make a careful critical examination of manufacturers' or trade associations' recommendations and if necessary, require supporting evidence.
 - Aim for the middle. Specifications that are too stringent may increase the contract bid price. Specifications that are too lax may compromise the quality of the final product.
 - Ensure that the provision gives directions that are consistent with the standard practice currently used by the Department.
 - Ensure that the special provision only modifies the standard specifications and not other special provisions.

SPECIFICATION AND SPECIAL PROVISION CHART

STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION

Reprinted approximately every 3 to 5 years by IDOT. Provides standard specifications applicable to general requirements and covenants, earthwork, base courses, surface courses, structures, materials, equipment and traffic control. All local agency contracts involving State, Federal or Motor Fuel Tax funds must cite and comply with provisions in this book.

SUPPLEMENTAL SPECIFICATIONS

Supplement the Standard Specifications. Applicable to and included, by reference, in all contracts advertised and awarded by the Department and local agency projects administered by the Department.

RECURRING SPECIAL PROVISIONS

Used frequently. Applicable to and may be included, by check sheet, in selected contracts advertised and awarded by the Department. Local Agencies may also use on non-IDOT awarded contracts.

INSERTED SPECIAL PROVISIONS

Department approved special provisions that are issued throughout the year to fulfill needed revisions. Similar to the Recurring Special Provisions but are relatively new and subject to revision.

GUIDE BRIDGE SPECIAL PROVISIONS

Special provisions issued by the Bureau of Bridges and Structures. These special provisions are relatively new and may be revised often. Once no revisions occur for a year, they may become Inserted Special Provisions.

LOCAL ROADS SPECIAL PROVISIONS

Special provisions issued by the Central Bureau of Local Roads and Streets. These special provisions are written to cover the needs of local agencies when they differ from those of the State.

DISTRICT SPECIAL PROVISIONS

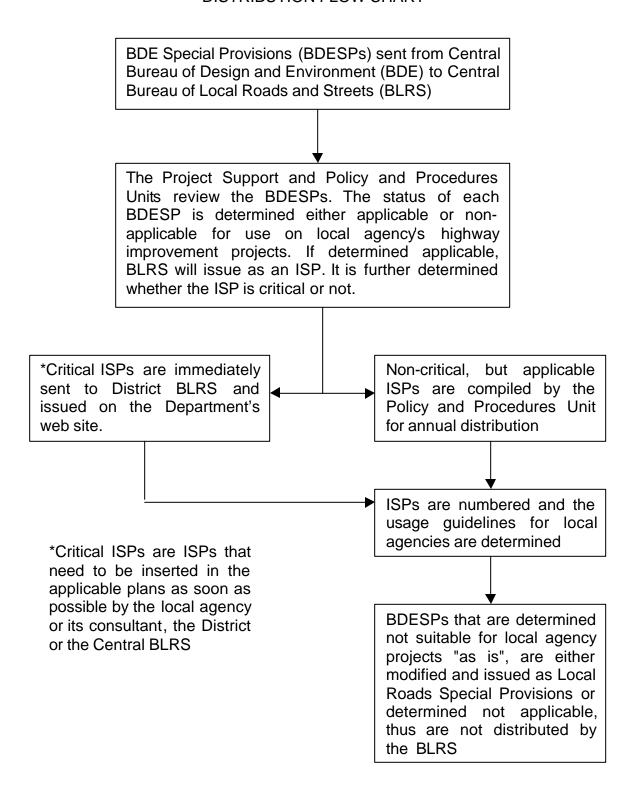
These are special provisions created by a district to address specific needs that are not addressed in one of the above.

PROJECT SPECIFIC SPECIAL PROVISIONS

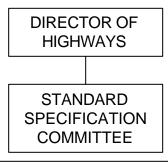
These are special provisions written by the designer to address a project specific situation.

LOCAL ROADS & STREETS INSERTED SPECIAL PROVISIONS (ISPs)

DISTRIBUTION FLOW CHART



SPECIFICATION COMMITTEE ORGANIZATION CHART



Bureau of Construction (2 members)

Bureau of Bridges and Structures (1 member) Bureau of Design and Environment (2 members)

Bureau of Local Roads and Streets (1 member) Bureau of Operations (2 members)

Bureau of Materials and Physical Research (2 members)

Districts (3 members on a rotational basis) FHWA (1 member)

The Standard Specifications Committee provides the Division of Highways the means for developing and implementing specifications, which are concise, technically sound, and are applicable statewide.

The committee is responsible for the Standard Specifications for Road and Bridge Construction and the annual publication of Supplemental Specifications and Recurring Special Provisions. The activities of the committee include:

- 1. The review and approval/rejection of proposed changes to the Standard Specifications.
- 2. The upgrading of BDE Special Provisions and LR Special Provisions to Recurring Special Provisions.
- 3. The upgrading of Recurring Special Provisions to Supplemental Specifications.

These activities are accomplished through review and recommendations from appropriate bureau(s) and the districts.

Local Agencies should submit any suggested changes to the Engineer of Local Roads and Streets.